

- Bearing 50 includes pillow blocks 51 and 53 which are bolted to opposite sides of arm 8. Each of the pillow blocks is of a type which is known in the art and includes a bearing (not shown) which would alone permit some degree of non-axial motion of shaft 48. The combination of two pillow blocks, however, prevents any such non-axial motion. Drive hub 32, which includes a flange 33 is bolted to one end of a universal joint 52. The other end of universal joint 52 is mounted to shaft 54 from hydraulic drive motor 56 which is mounted on the first part of the support structure. Drive lug 28 engages a slot 30 such that activation of drive motor 56 to rotate drive hub 32 drives the brush accordingly.
- The provision of universal joints 46 and 52 causes drive hub 32 and idler hub 34 to automatically align to provide a common axis of rotation for the brush.
- With reference to FIGS. 6 through 8, stop 22 comprises a first tube 58 which slides within a second tube 60. First tube 58 has mounting holes 62 while second tube 60 has mounting holes 64. Respective ends of the stop element 22 are mounted to the mounting bracket 44 and mounting element 1 such that element 22 is parallel to the hydraulic cylinder 20. Inner element 58 includes holes 66 which receive a transverse pin 68. This pin is placed in a selected one of the holes 66 to adjust the minimum length of stop element 22. Holes 66 are in two rows to increase the strength of the material between the holes.
- As shown in FIG. 6, when inner element 58 slides within outer element 60 such that an end 70 of the outer element engages transverse pin 68, the stop element cannot be shortened further, and the sweeper is accordingly held at that height. The sweeper may be raised for transport by activating hydraulic cylinder 20, thus lengthening stop element 22.
- Referring to FIG. 8, transverse pin 68 is one part of an element comprising a handle portion 72 and a hook portion 74. Handle portion 72 allows one to grasp the element and to rotate it to such a position that hook portion 74 is disengaged from outer element 60. This allows transverse pin 68 to be removed and re-inserted into another of the holes 66. When the hook portion 74 is in the position shown in FIG. 8, transverse pin 68 is securely retained in the selected hole 66.
- Modification of the invention within the scope of the appended claims will be apparent to those skilled in the art.
- I claim:
1. Sweeping apparatus comprising support means for supporting a brush for rotation about a generally horizontal axis and means for mounting said support means on a vehicle, wherein said support means comprises first and second arms, means for moving said first arm with respect to said second arm between a first position wherein said first arm is spaced from said second arm by a distance such that said brush is received between said arms and a second position wherein said first arm is spaced from said second arm such that said brush is released from between said arms, drive means mounted on said first arm by universal joint means for engaging one end of said brush and for rotating said brush about an axis extending between said first and second arms, and idler means mounted on said second arm by universal joint means for engaging an opposite end of said brush.
 2. Sweeping apparatus according to claim 1 wherein said second arm is mounted for rotation with respect to

said first arm and further comprising means for rotating said second arm with respect to said first arm.

3. Sweeping apparatus according to claim 2 wherein said means for rotating said second arm comprises a hydraulic cylinder. 5

4. Sweeping apparatus according to claim 2 further comprising means for restricting the movement of said means for rotating said second arm.

5. Sweeping apparatus according to claim 1 wherein said drive means comprises hub means for fitting within a hollow core of said brush, said hub means having at least one slot therein for receiving a lug on said brush. 10

6. Sweeping apparatus according to claim 5 wherein said drive means and said idler means further comprise flanges for engaging outer edges of said brush. 15

7. Sweeping apparatus according to claim 1 wherein said means for mounting said support means on a vehicle comprises upper and lower arms each of which is mounted at respective opposed ends to said support means and to said vehicle and elongation means be- 20

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tween said upper and lower arms for causing adjacent ends of said upper and lower arms to raise or lower according to the length of said elongation means.

8. Sweeping apparatus according to claim 7 further comprising stop means attached to said elongation means for limiting the movement of said elongation means, said stop means comprising a first element which slides within a second element, said first element having a plurality of holes therin for receiving a transverse pin 10 for selectively engaging said second element.

9. Sweeping apparatus according to claim 8 further comprising said transverse pin, wherein said transverse pin comprises a first part which extends through one of said holes and a second part which hooks over said 15 second part to retain said first part in said one of said holes.

10. Sweeping apparatus according to claim 1 wherein said support means comprises means for rotating said brush about a vertical axis.

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